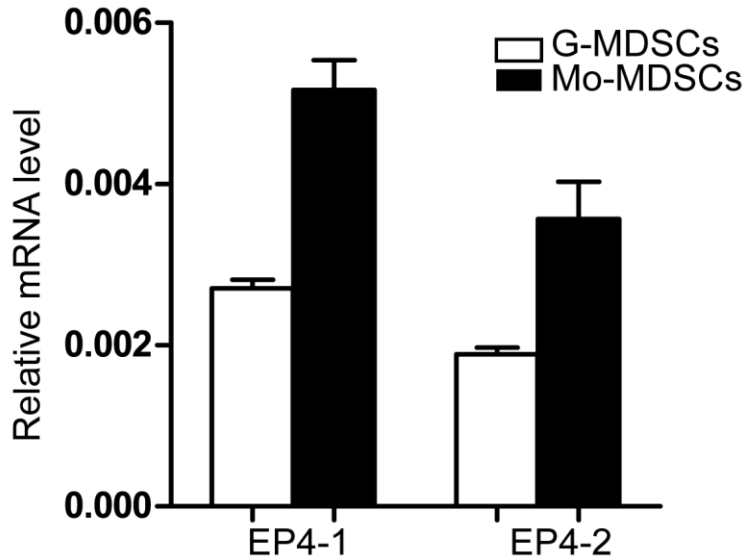


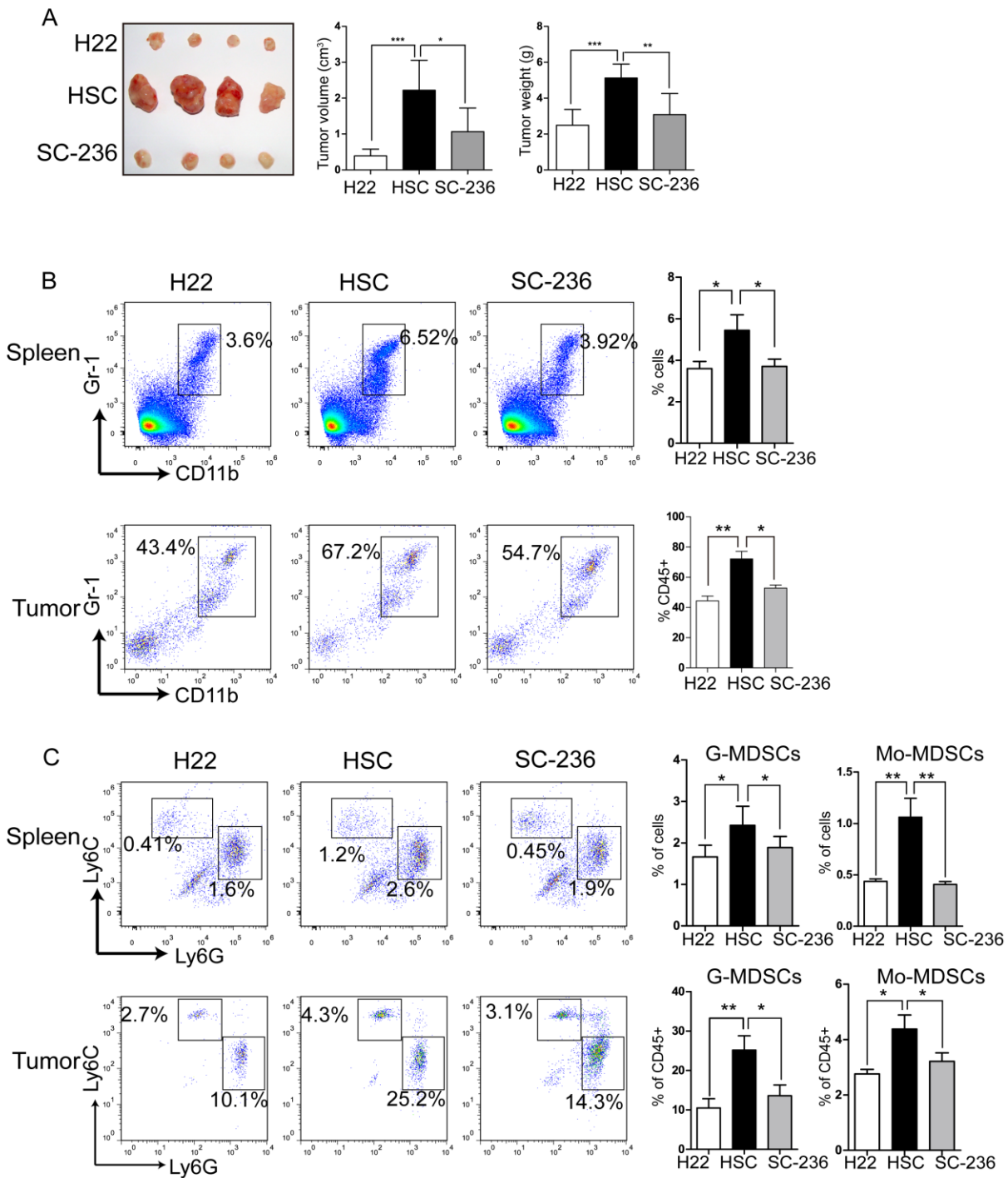
Activated hepatic stellate cells promote liver cancer by induction of myeloid-derived suppressor cells through cyclooxygenase-2

Supplementary Material



Supplementary Figure 1

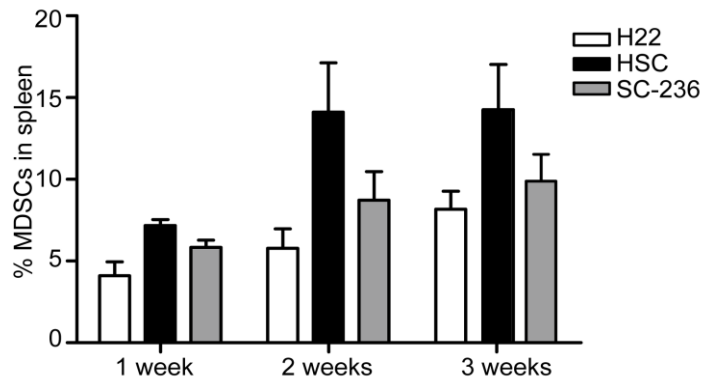
EP4-1 and EP4-2 expression. G-MDSCs and Mo-MDSCs were sorted with MACS and *EP4-1* and *EP4-2* mRNA was measured with RT-PCR. Data are expressed as means \pm SD relative to *GAPDH*.



Supplementary Figure 2

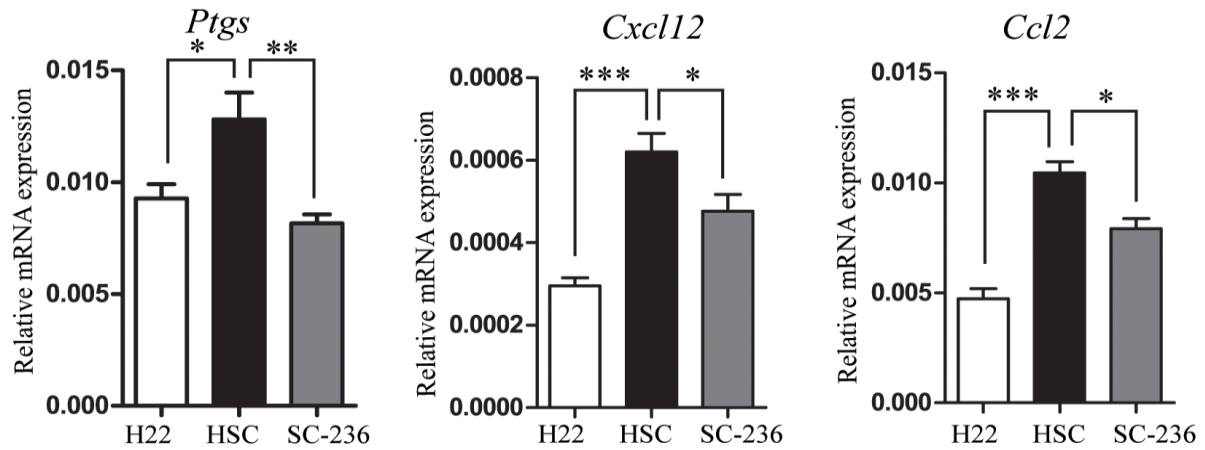
HSCs promoted growth of HCC by induction of MDSCs via PGE₂ signaling. (A) Representative tumor samples, tumor volume and weight. (B) MDSCs in splenocytes and tumors were detected by flow cytometry; number is percent of the cell population represented by MDSCs (right

panels). Percent MDSCs was calculated using the formula: corrected MDSC percent = $100\% \times \text{CD11b}^+ \text{Gr-1}^{+/low} \text{ percent} \times \text{CD45}^+ \text{ percent}$. (C) G-MDSCs and Mo-MDSCs were measured with flow cytometry. Number is percent of the cell population represented by G-MDSCs and Mo-MDSCs (right panels) and these were calculated as follows: corrected G-MDSC percent = $100\% \times \text{CD11b}^+ \text{ percent} \times \text{Ly6G}^+ \text{Ly6C}^{low} \text{ percent} \times \text{CD45}^+ \text{ percent}$. Corrected Mo-MDSC percent = $100\% \times \text{CD11b}^+ \text{ percent} \times \text{Ly6G}^- \text{Ly6C}^{high} \text{ percent} \times \text{CD45}^+ \text{ percent}$. Data represent 3 independent experiments and are expressed as means \pm SD; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.



Supplementary Figure 3

Splenic MDSC populations in mice at 1, 2, and 3 weeks after tumor injection. Percent of MDSCs in spleen of tumor-bearing mice at indicated time. A subcutaneous mouse model was used to exclude increased MDSCs in the HSC group due to greater tumor burdens.



Supplementary Figure 4

Expression of cytokines and chemokines in the tumor microenvironment. The mRNA expression of *Ptgs2*, *Cxcl12*, and *Ccl2* in the tumor microenvironment was detected using RT-PCR.